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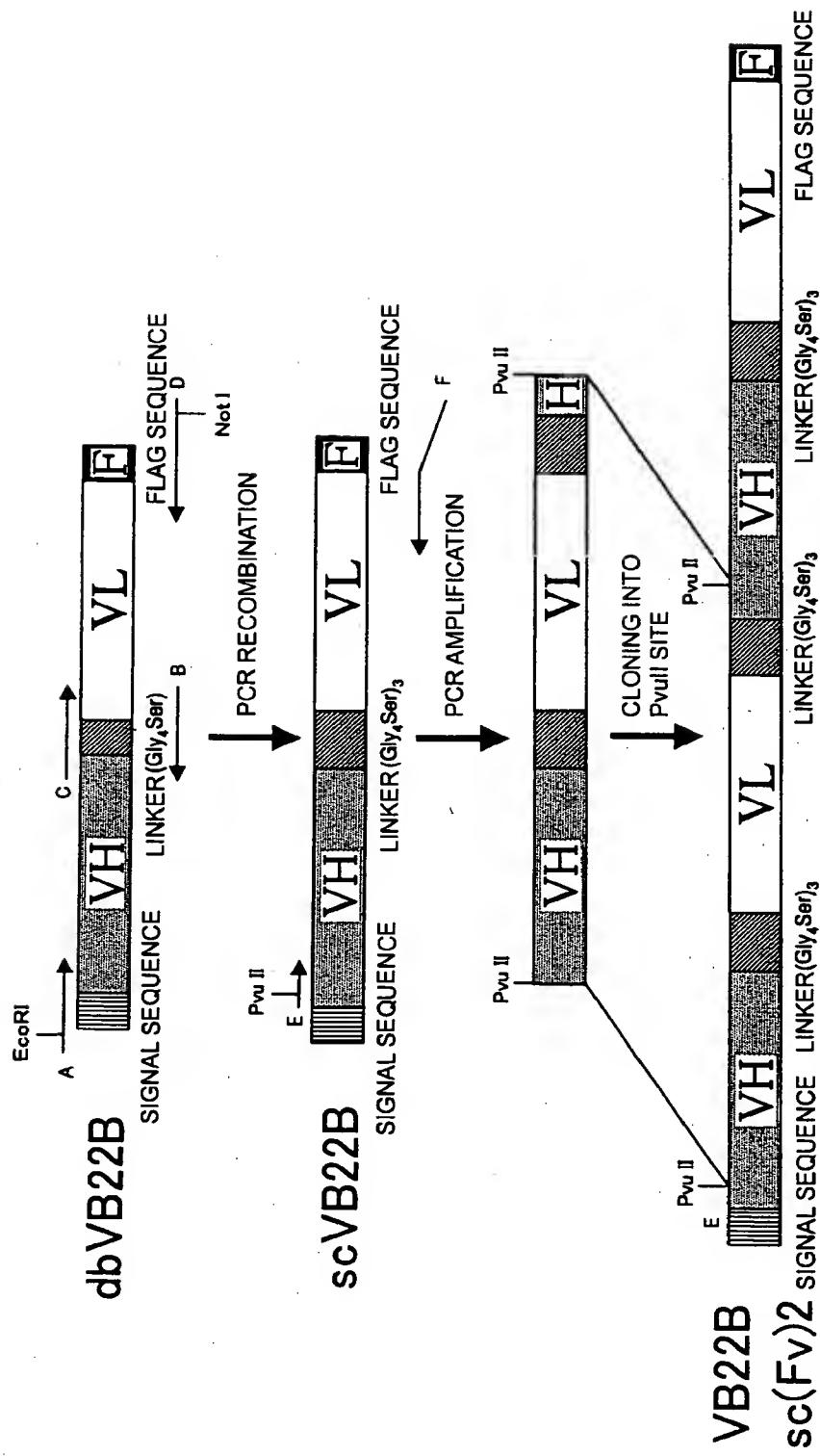
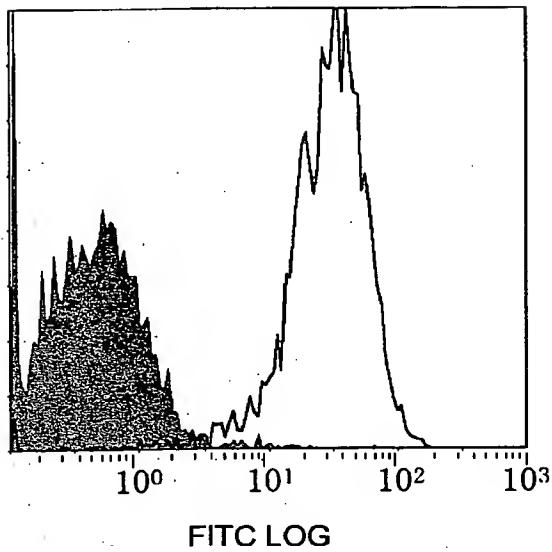


FIG. 1

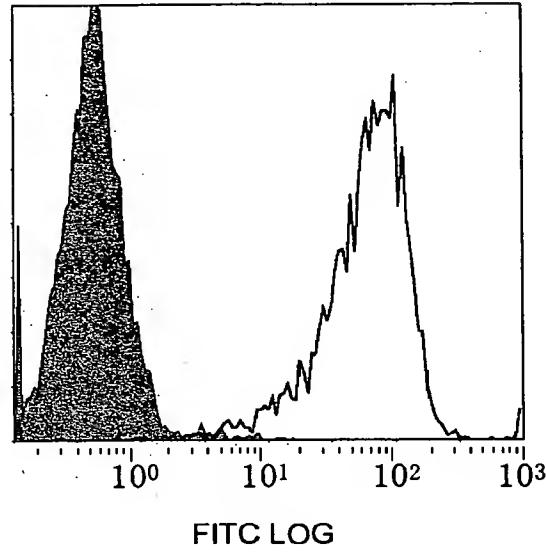
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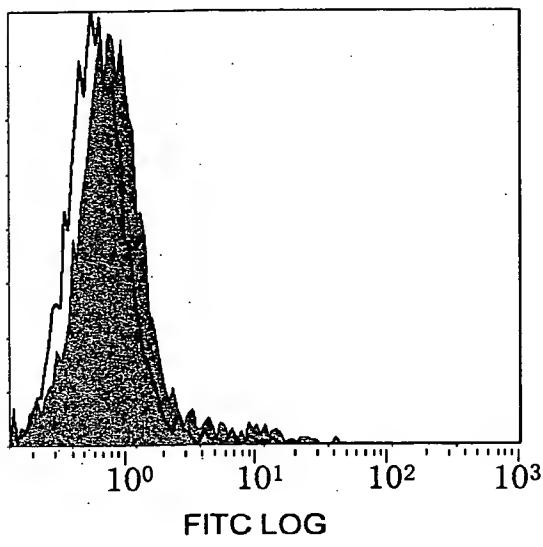
CHO-HUMAN Mpl



CHO-MONKEY Mpl



CHO-MOUSE Mpl



CHO

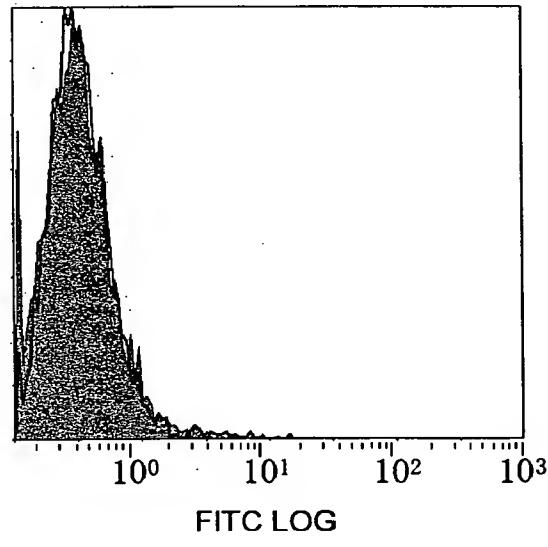


FIG. 2

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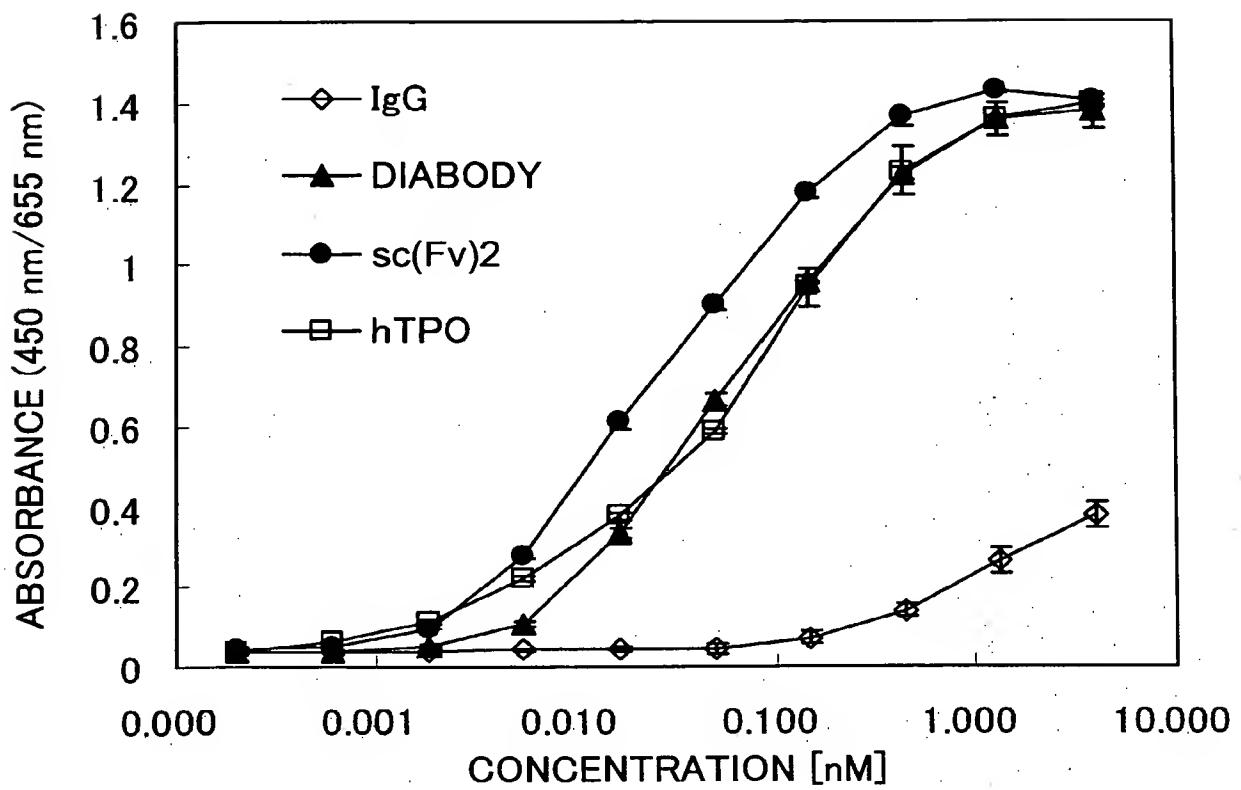


FIG. 3

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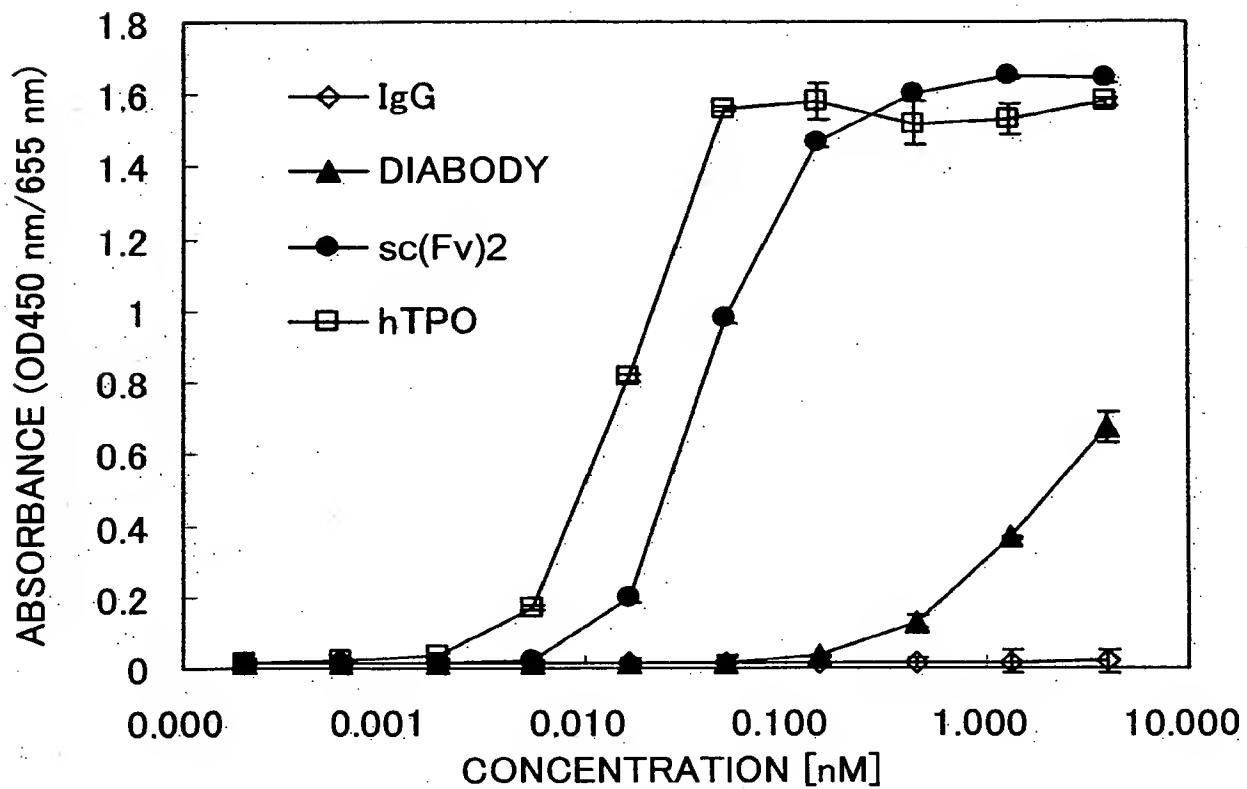


FIG. 4

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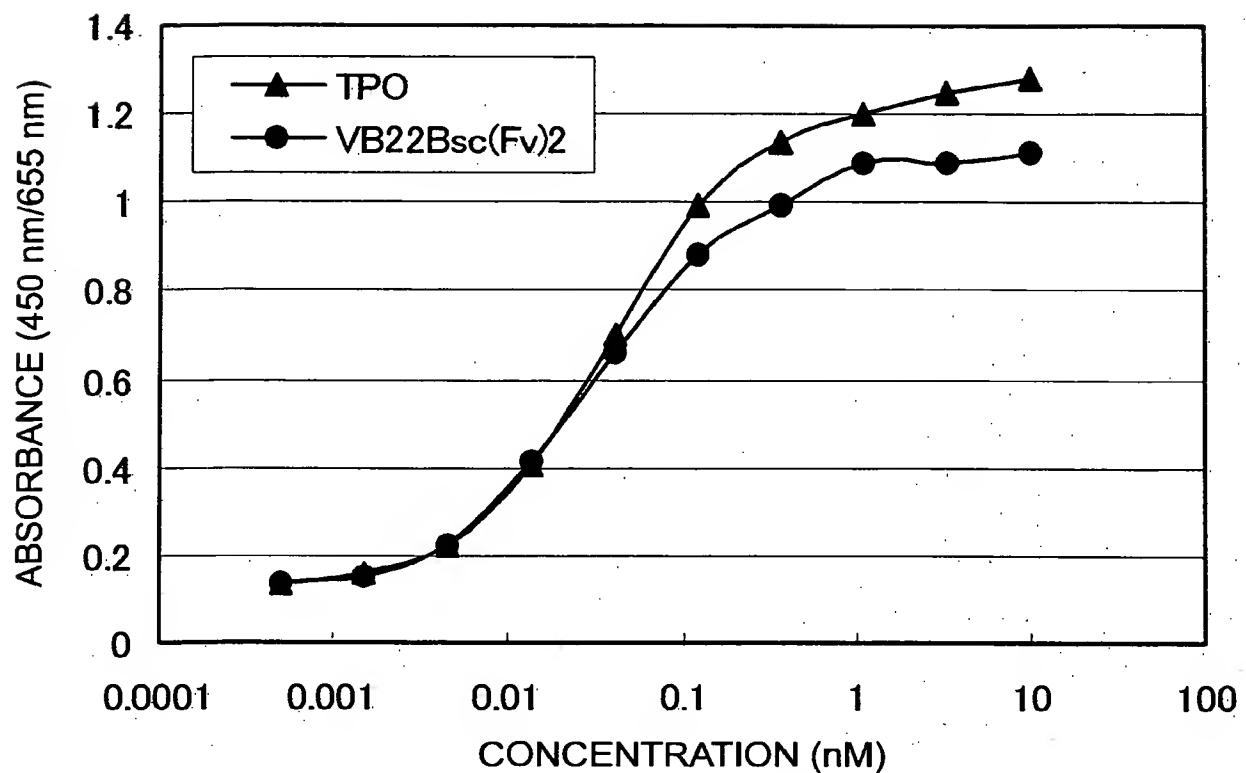


FIG. 5

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		CDR1	CDR2
VA7	QVQLQQSGPELVKPGASVKISCKASGYAFS	SSWMN	WVKQRPKGLEWIG RTY PGDGDTNYNGKFKG
VA130	QVQLQQSGPELVKPGASVKISCKASGYAFS	SSWMN	WVKQRPKGLEWIG RIYPGDGDTNYNGKFKG
VA259	QVQLQQSGPELVKPGASVKISCKASGYAFS	SSWMN	WVKQRPKGLEWIG RIYPGDGETNYNGKFKG
VB17B	QVQLQQSGPELVKPGASVKISCKASGYFTS	SSWMN	WVKQRPKGLEWIG RIYPGDGDTNYNGKFKG
VB12B	QVQLQQSGPELVKPGASVKISCKASGYAFS	RSWMN	WVKQRPKGLEWIG RIYPGDGDTNYNGKFKG
VB140	QVQLQQSGPELVKPGASVKISCKASGYAFS	NSWMN	WVKQRPKGLEWIG RIYPGDGETNNNGKFKG
VB33	QVQLQQPGAEVLVKGASVVKLSCKASGYFT	NYWVN	WVKQRPGRGLEWIG RIHPSDSETHCNQKFKR
VB45B	QVQLQQSGPELVKPGASVVKISCKASGYAFS	SSWMN	WVKQRPKGLEWIG RIYPGDGETNNNGKFKG
VB8B	QVQLQQSGPELVKPGASVVKISCKASGYAFS	TSWMN	WVKQRPKGLEWIG RIYPGDGEANYNGKFKG
VB115	QVQLQQSGPELVKPGASVVKISCKASGYAFS	SSWMN	WVKQRPKGPEWIG RIYPGDGETNYNGKFKG
VB14B	QVQLQQSGPELLNPVGASVVKISCKASGYAFS	RSWMN	WVKQRPKGLEWIG RIYPGDGETNYNGKFKG
VB22B	QVQLQQSGPELVKPGASVVKISCKASGYFT	NSWMN	WVKQRPKGLEWIG RIYPGDGETIYNGKFRV
VB16	QVQLQQPGTELVRPGASVVKLSCKASGYFT	DYWVN	WVKQRPGRGLEWIG RIHPYDSETHYNQKFKN
VB157	QVQLQQPGAEVLVKGASVVKLSCKASGYFT	DYWMN	WVKQRPGRGLEWIG RIHPFDSETHCSQKFKN
VB4B	QVQLQQSGPELVKPGASVVKISCKASGYFT	NSWMN	WVRQRPGKLEWIG RIYPGDGETIYNGKFRV
VB51	QVQLQQSGPELVKPGASVVKISCKASGYAFS	NSWMN	WVNQRPGKLEWIG RIYPGDGTIYNGNFKG
		CDR3	
VA7	KATLTADKSSSTAYMQLSSLTSEDSAVYFCAR	GWILADGGYSFAY	WGQGTLVTVSA (SEQ ID NO: 124)
VA130	KATLTADKSSSTAYIQLSSLTSEDSAVYFCAR	GYAD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 126)
VA259	KATLTADKSSNTAYMQLSSLTSEDSAVYFCAR	GFGD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 128)
VB17B	KATLTADKSSSTAYMQLSSLTSEDSAVYFCAR	GYAD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 130)
VB12B	KATLTADKSSSTAYMQLSSLTSEDSAVYFCAS	GYDD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 132)
VB140	KATLTADKSSSTAYMQLSSLTSEDSAVYFCAR	GYGD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 134)
VB33	KATLTVNKSSSTAYIQLHSLTSEDSAVYYCTS	GGW-----FAY	WGQGTLVTVSA (SEQ ID NO: 136)
VB45B	KATLTADKSSSTAYMQLSSLTSEDSAVYFCAR	GYGD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 138)
VB8B	KATLTADKSSSSAYMQLSSLTSEDSAVYFCAR	GYGD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 140)
VB115	KATLTADKSSSTVYMQLSSLTSEDSAVYFCAR	GYGD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 142)
VB14B	KATLTADKSSSTAYMQFSSLTSEDSAVYFCAR	GDGD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 144)
VB22B	KATLTADKSSSTAYMDISSLTSEDSAVYFCAR	GYDD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 118)
VB16	KATLTVDKSSSTAYIQLSSLTSEDSAVYYCAS	GGW-----FAS	WGQGTLVTVSA (SEQ ID NO: 146)
VB157	KATLTVDKSSNTAYIQFSSLTSEDSAVYYCSS	GGW-----FAY	WGQGTLVTVSA (SEQ ID NO: 148)
VB4B	KATLTADKSSSTAYMEISSLTSEDSAVYFCAR	GYDD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 150)
VB51	KATLTADKSSSIAYMQLSSLTSEDSAVYFCTS	GYDD----YSFAY	WGQGTLVTVSA (SEQ ID NO: 152)

FIG. 6

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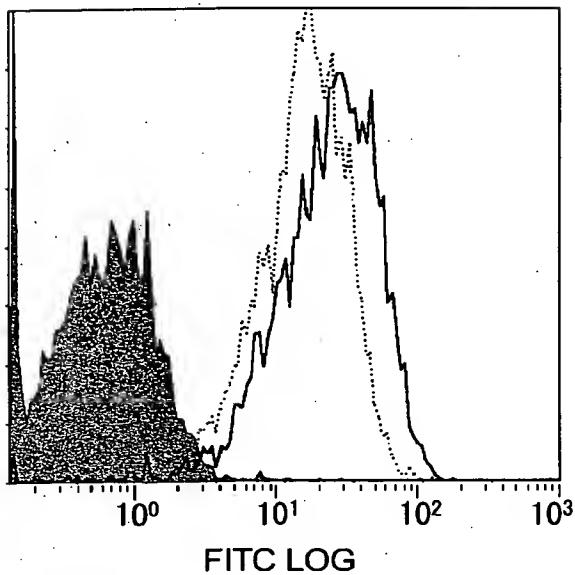
		CDR1		CDR2
VA7	DIVMTQAAPSIPTPGESVSISC	RSSKSLLHSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VA130	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLHSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VA259	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLHSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VB17B	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLHSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VB12B	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLHSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VB140	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLHSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VB33	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLYSNGNIYL	WFLQRPGQSPQLLIY	RMSNLAS
VB45B	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLHSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VB8B	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLHSNGNTLYL	WFMQRPGQSPQLLIY	RMSNLAS
VB115	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLHSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VB14B	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLHSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VB22B	DIVMTQAAPSIPTPGESVSISC	RSSKSLLHSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VB16	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLYSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VB157	DIVMTQAAPSVSVPVTPGESVSISC	RSSKSLLYSNGNIYL	WFLQRPGQSPQLLIY	RMSNLAS
VB4B	DIVMTQAAPSVPVTPGESVSISC	RSSKSLLHNNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
VB51	DIVMTQAAPSLPVTPGESVSISC	RSSKSLLHSNGNTLYL	WFLQRPGQSPQLLIY	RMSNLAS
		CDR3		
VA7	GVPDRFSGSGSGTAFTLISRVEAEDVGIVYYC	MQHLEYPFT	FGTGTKLEIK	(SEQ ID NO: 125)
VA130	GVPDRFSGSGSGTAFTLISRVEAEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 127)
VA259	GAPDRFSGSGSGTAFTLISRVETEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 129)
VB17B	GVPDRFSGSGSGTAFTLISRVEAEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 131)
VB12B	GVPDRFSGSGSGAAFTLISRVEAEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 133)
VB140	GVPDRFSGSGSGAAFTLISRVEAEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 135)
VB33	GVPDRFSGSGSGTAFTLISRVEAEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 137)
VB45B	GVPDRFSGSGSGAAFTLISRVEAEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 139)
VB8B	GVPDRFSGSGSGTAFTLISRVEAEDVGVYYC	MQHVEYPY	FGSGTKLEIK	(SEQ ID NO: 141)
VB115	GVPDRFSGSGSGTAFTLISRVEAEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 143)
VB14B	GVPDRFSGSGSGTAFTLISRVEAEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 145)
VB22B	GVPDRFSGSGSGTAFTLISRVEAEDVGVYYC	MQHIEYPFT	FGSGTKLEIK	(SEQ ID NO: 120)
VB16	GVPDRFSGSGSGTAFTLTISSVEAEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 147)
VB157	GVPDRFSGSGSGTAFTLKRISRVEAEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 149)
VB4B	GVPDRFSGSGSGTAFTLISRVEAEDVGVYYC	MQHIEYPFT	FGSGTKLEIK	(SEQ ID NO: 151)
VB51	GVPDRFSGSGSGTAFTLISRVEAEDVGVYYC	MQHLEYPYT	FGSGTKLEIK	(SEQ ID NO: 153)

FIG. 7

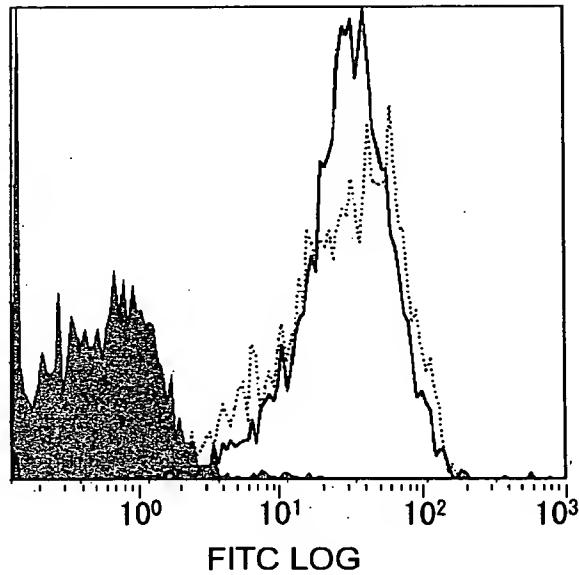
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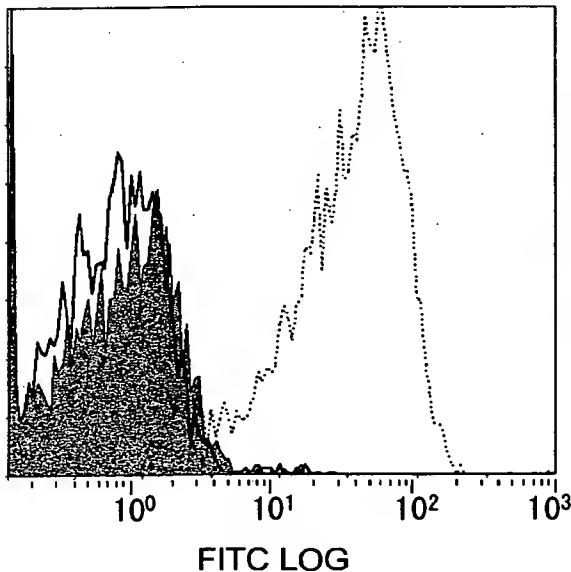
CHO-HUMAN Mpl



CHO-MONKEY Mpl



CHO-MOUSE Mpl



CHO

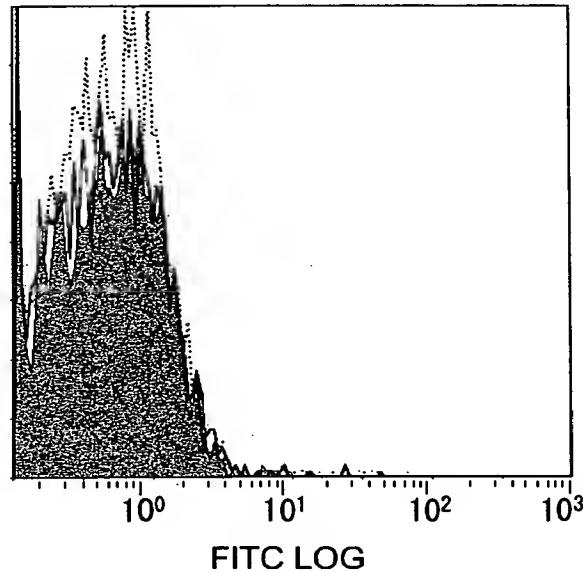


FIG. 8

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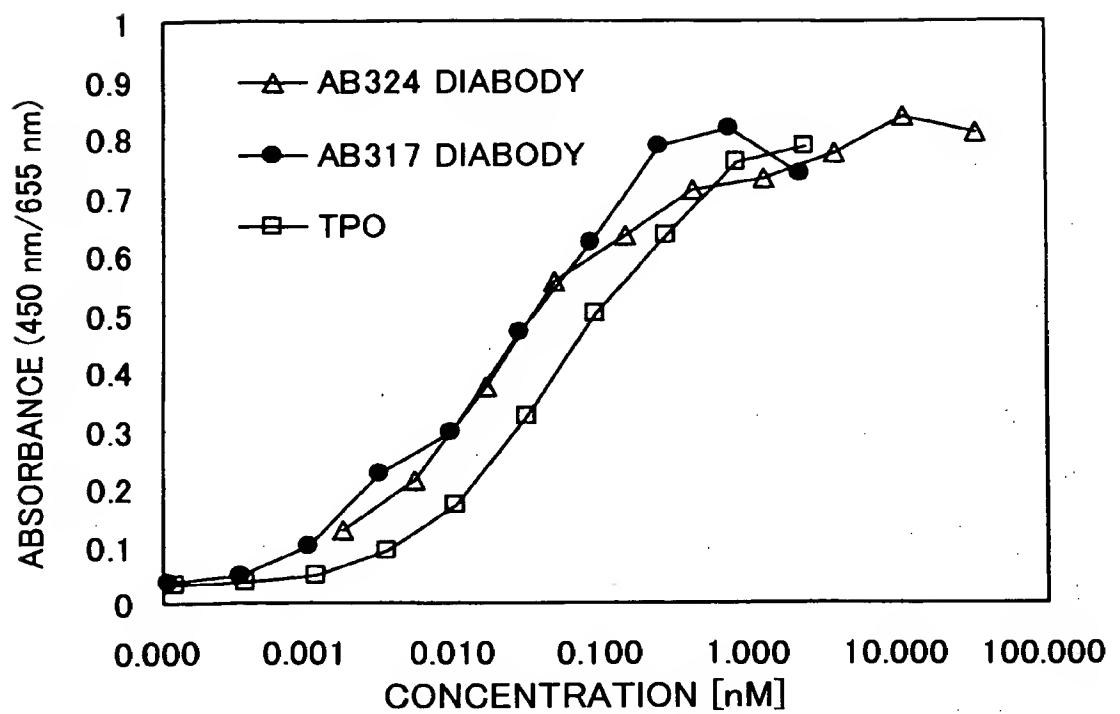


FIG. 9

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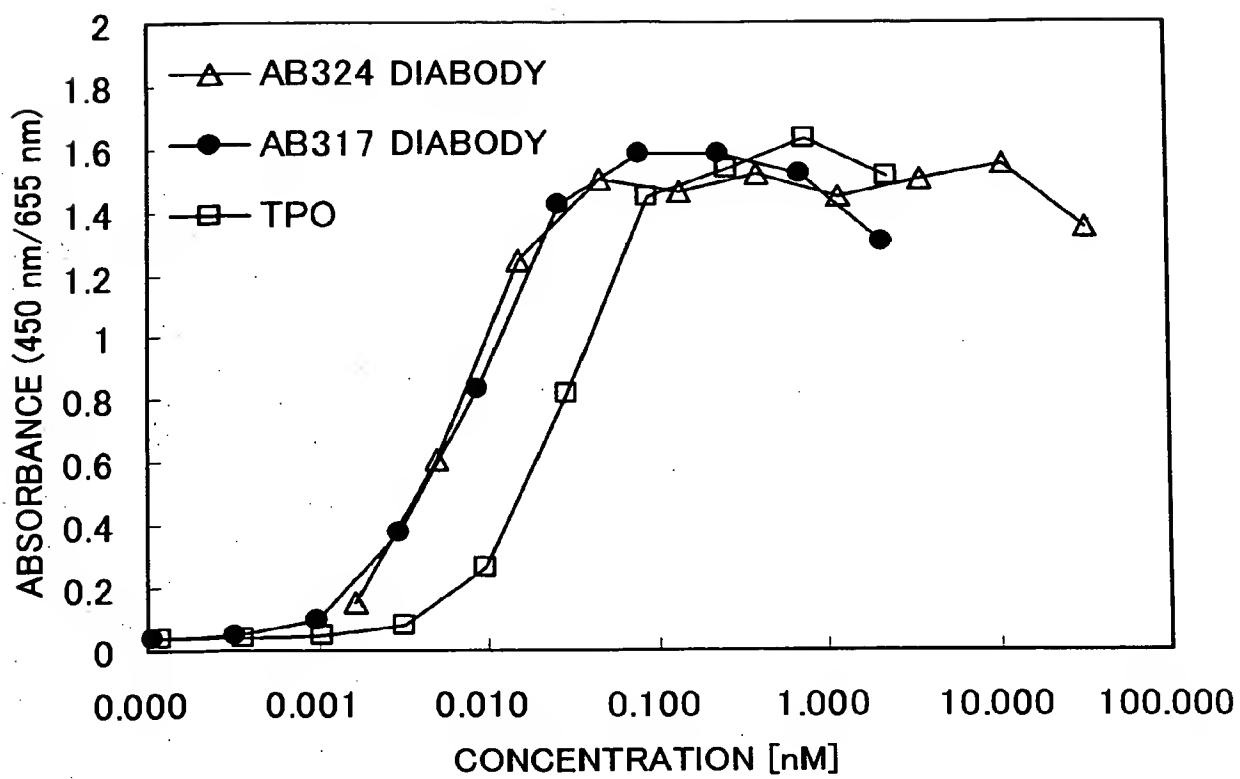


FIG. 10

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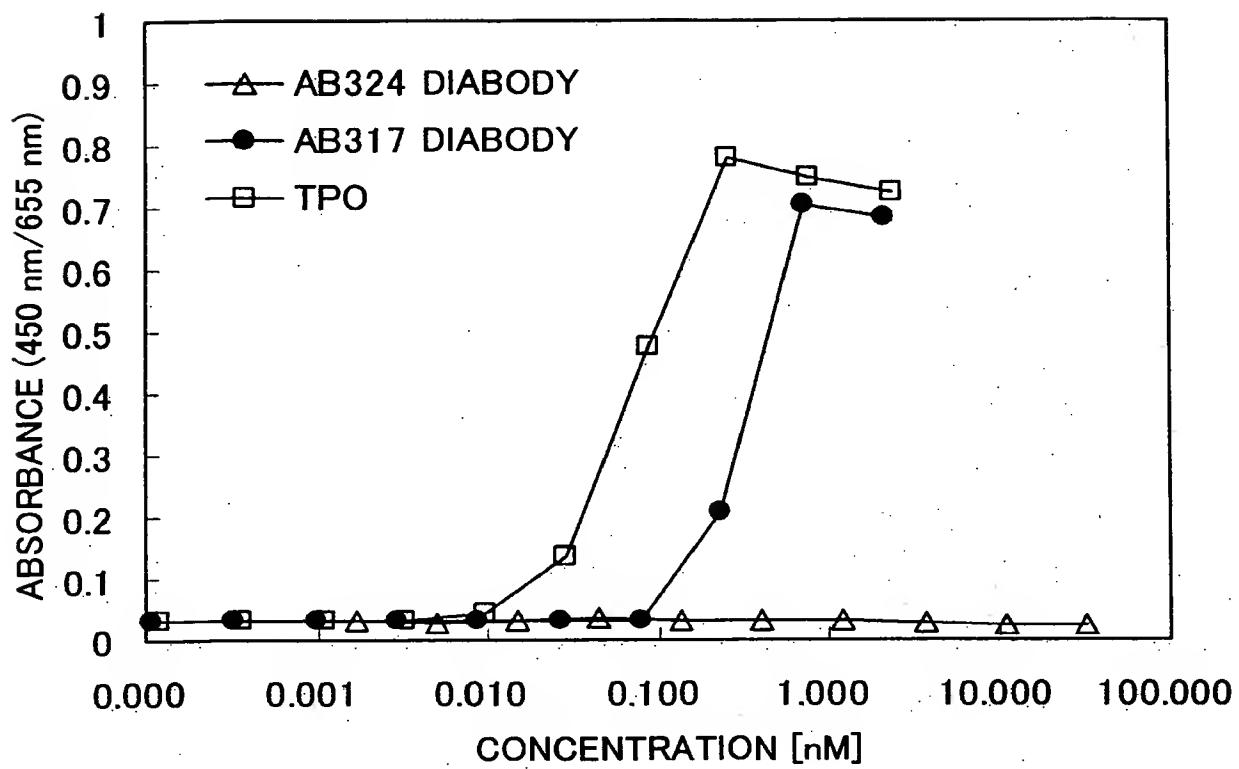


FIG. 11

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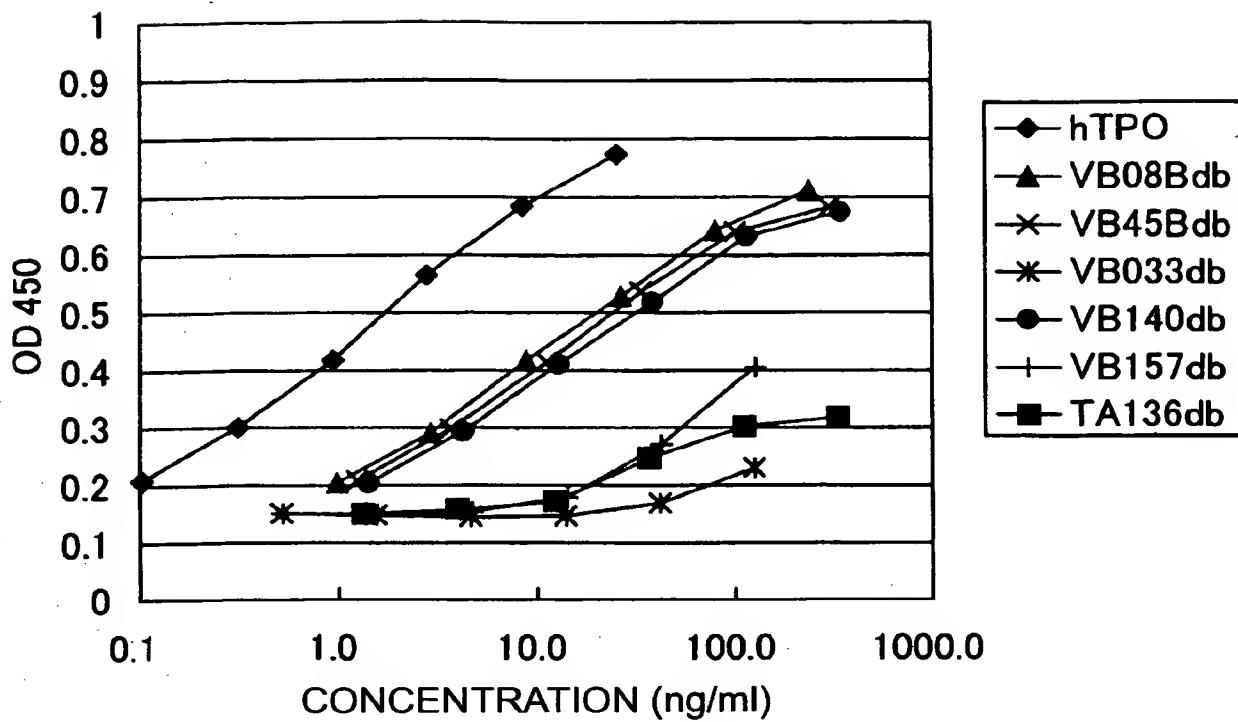


FIG. 12

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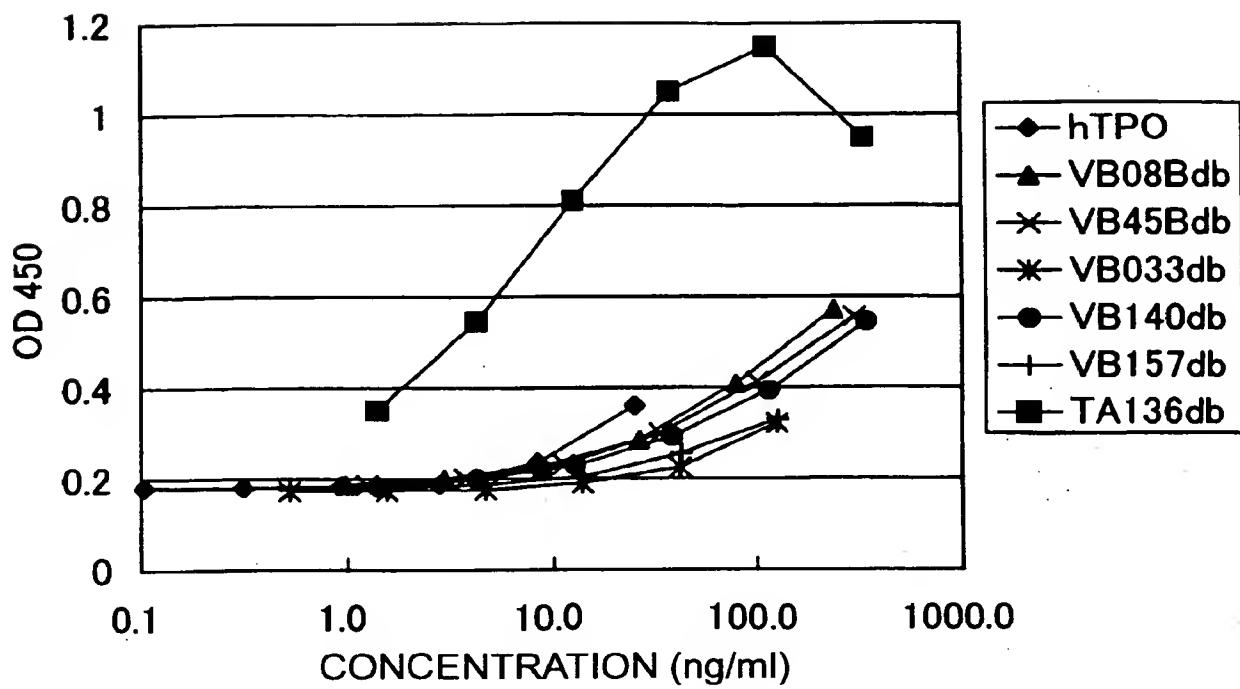


FIG. 13

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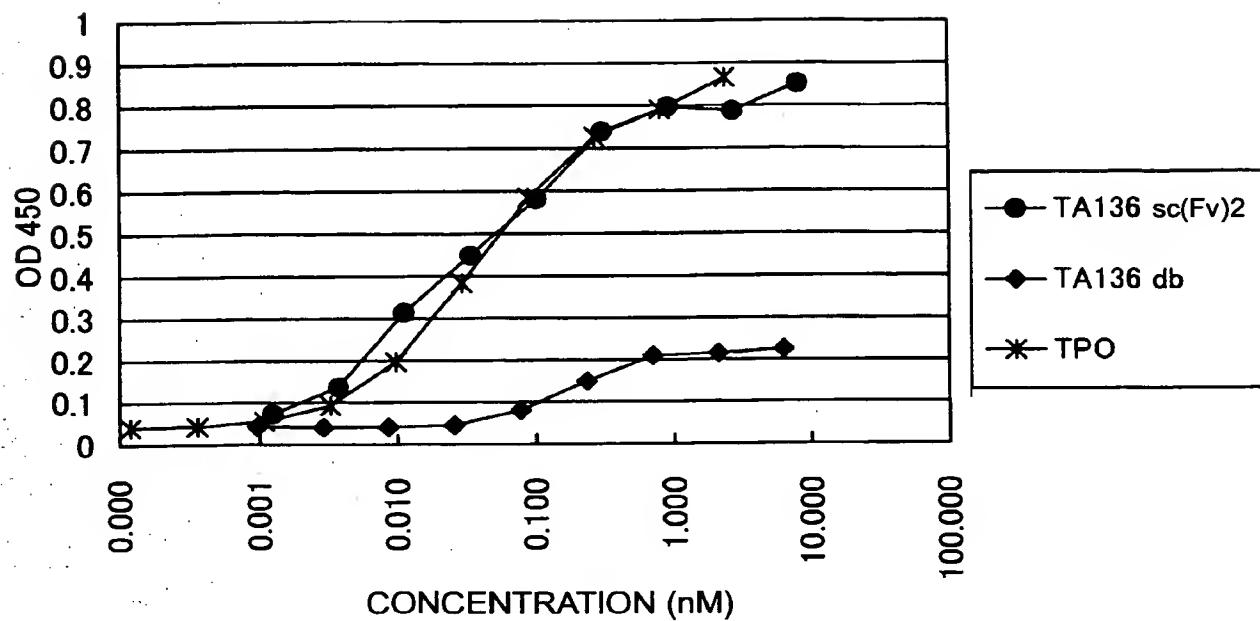


FIG. 14

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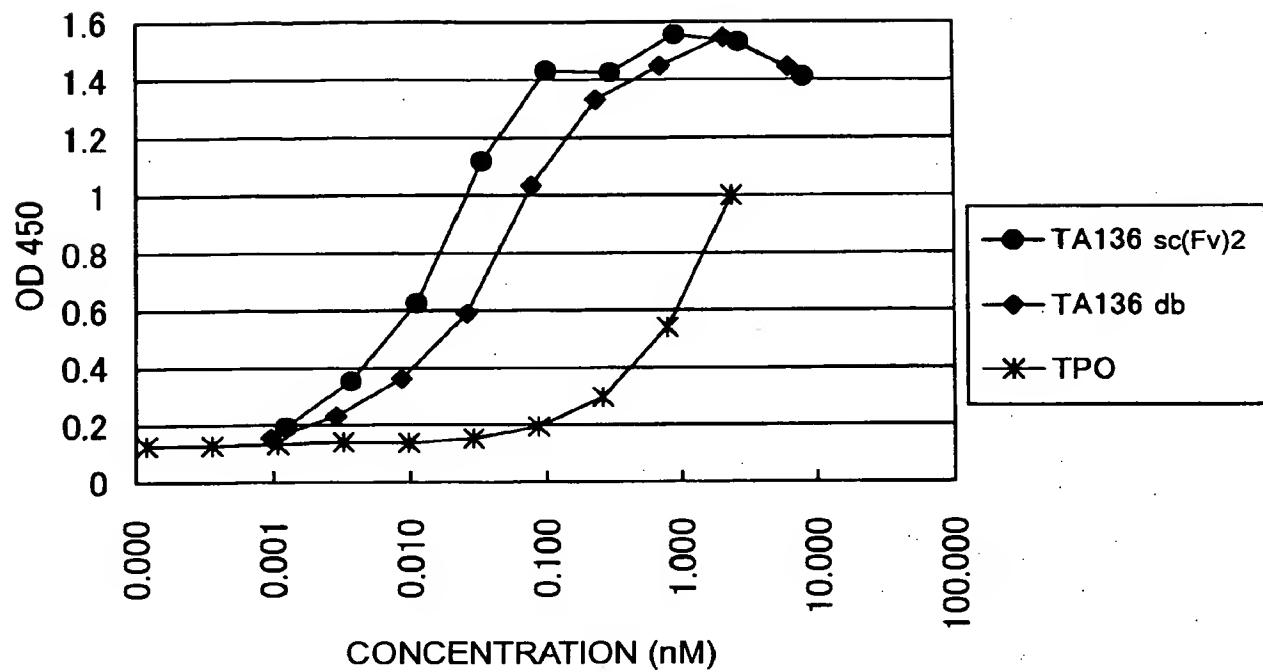


FIG. 15

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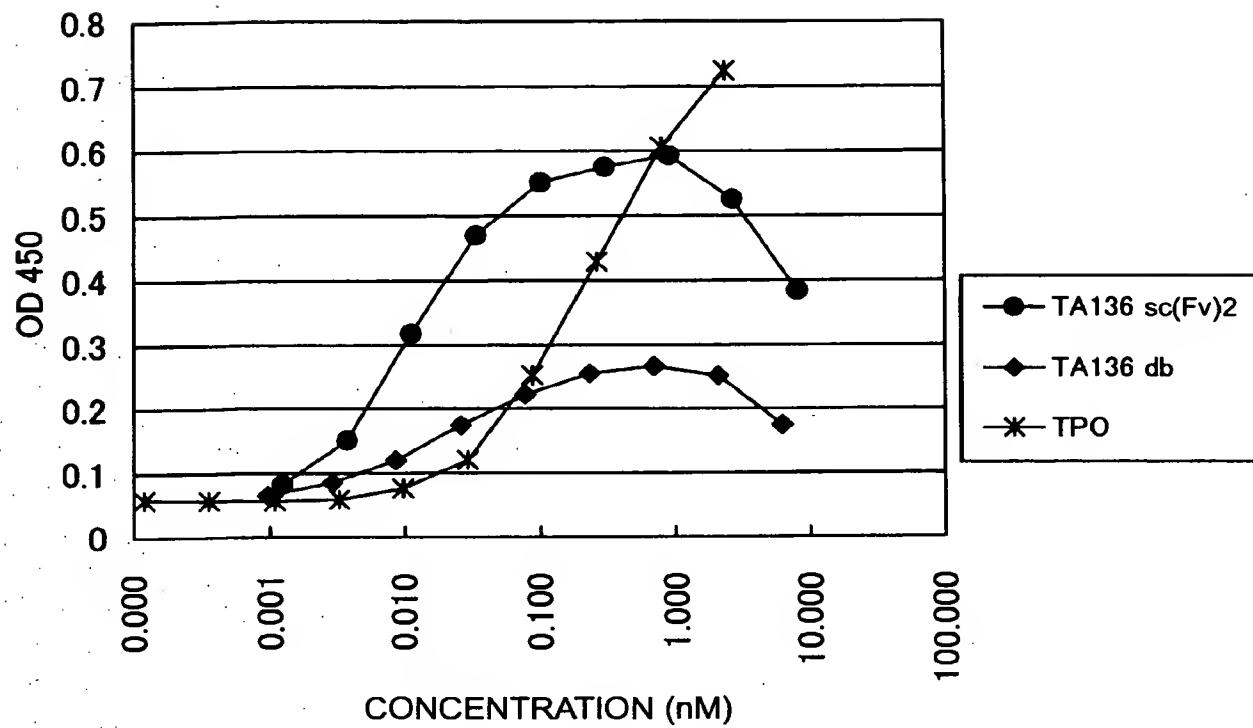


FIG. 16

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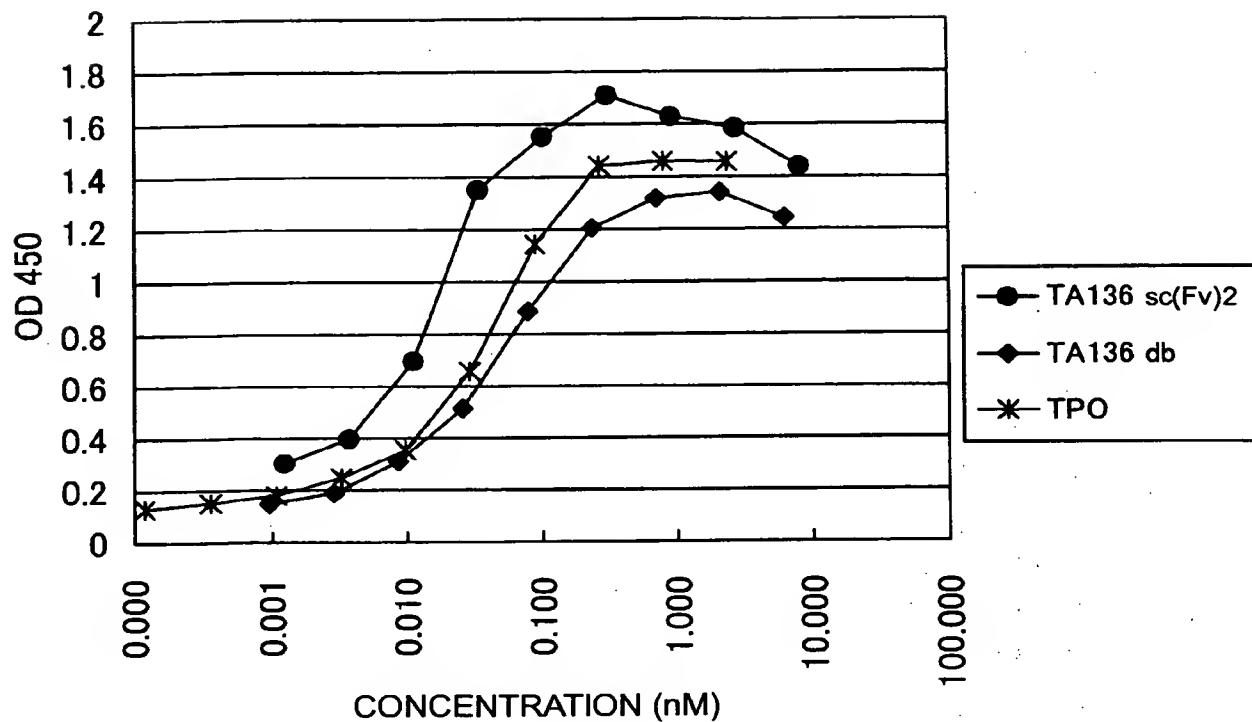


FIG. 17

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HUMANIZED HEAVY CHAIN

hVB22B	u2-wz4	QVQLVQSGPEVKPGASVKVSCKASGYTFT
hVB22B	q-wz5	QVQLVQSGPEVKPGASVKVSCKASGYTFT
hVB22B	p-z	QVQLVQSGPEVKPGASVKVSCKASGYTFT
hVB22B	g-e	QVQLVQSGPEVKPGASVKVSCKASGYTFT
hVB22B	e	QVQLVQSGPEVKPGASVKVSCKASGYTFT

FR1

CDR1

CDR2

nVB22B	u2-wz4	RVTITADESTSTAYMQLSSLRSEDTAVYYCAR	GYDDYSFAY	WGQGTTVTVSS	(SEQ ID NO: 289)
nVB22B	q-wz5	RVTITADESTSTAYMELSSLRSEDTAVYYCAR	GYDDYSFAY	WGQGTTVTVSS	(SEQ ID NO: 295)
nVB22B	p-z	RVTITADESTSTAYMELSSLRSEDTAVYYCAR	GYDDYSFAY	WGQGTTVTVSS	(SEQ ID NO: 229)
nVB22B	g-e	RVTITADESTSTAYMELSSLRSEDTAVYYCAR	GYDDYSFAY	WGQGTTVTVSS	(SEQ ID NO: 256)
nVB22B	e	RVTITADESTSTAYMELSSLRSEDTAVYYCAR	GYDDYSFAY	WGQGTLVTVSS	(SEQ ID NO: 262)

FR3

FR4

FIG. 18-1

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HUMANIZED LIGHT CHAIN

hVB22B	u2-wz4	DIVMTQSPLSLPVTPGEPASISC	RSSKSLLHSNGNTYLY	WFLQKPGQSPQLLIY	RMSNLAS
hVB22B	q-wz5	DIVMTQSPLSLPVTPGEPASISC	RSSKSLLHSNGNTYLY	WFQQKPGQAPRLLIY	RMSNLAS
hVB22B	p-z	DIVMTQSALSPLPVTPGEPASISC	RSSKSLLHSNGNTYLY	WFQQKPGQSPQLLIY	RMSNLAS
hVB22B	g-e	DIVMTQSALSPLPVTPGEPASISC	RSSKSLLHSNGNTYLY	WYLQKPGQSPQLLIY	RMSNLAS
hVB22B	e	DIVMTQSALSPLPVTPGEPASISC	RSSKSLLHSNGNTYLY	WYLQKPGQSPQLLIY	RMSNLAS
FR1		CDR1	FR2	CDR2	
hVB22B u2-wz4 GVPDRFSGSGSGTDFTLKISRVEAEDVGVYYC MOHIEYPFT hVB22B q-wz5 GVPDRFSGSGSGTAAFTLKISRVEAEDVGVYYC MQHIEYPFT hVB22B p-z GVPDRFSGSGSGTAAFTLKISRVEAEDVGVYYC MQHIEYPFT hVB22B g-e GVPDRFSGSGSGTAAFTLKISRVEAEDVGVYYC MQHIEYPFT hVB22B e GVPDRFSGSGSGTAAFTLKISRVEAEDVGVYYC MQHIEYPFT					

FIG. 18-2

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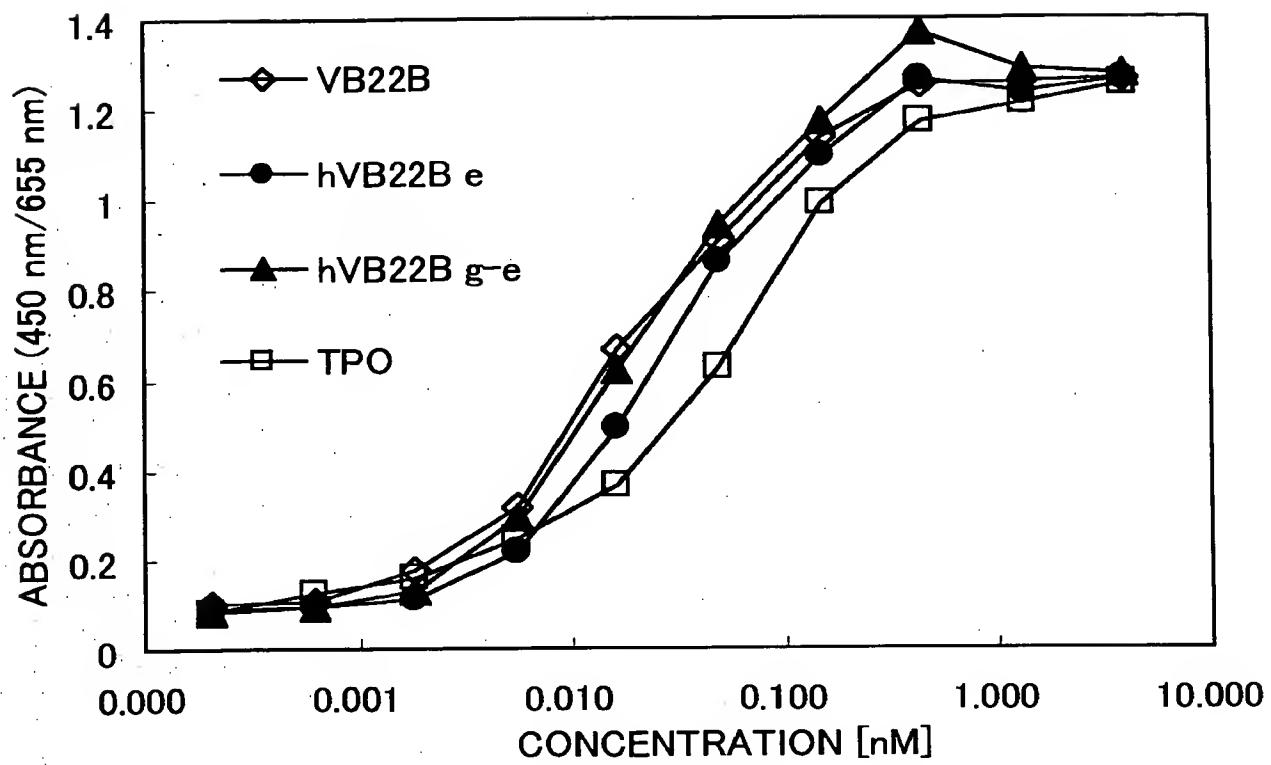


FIG. 19

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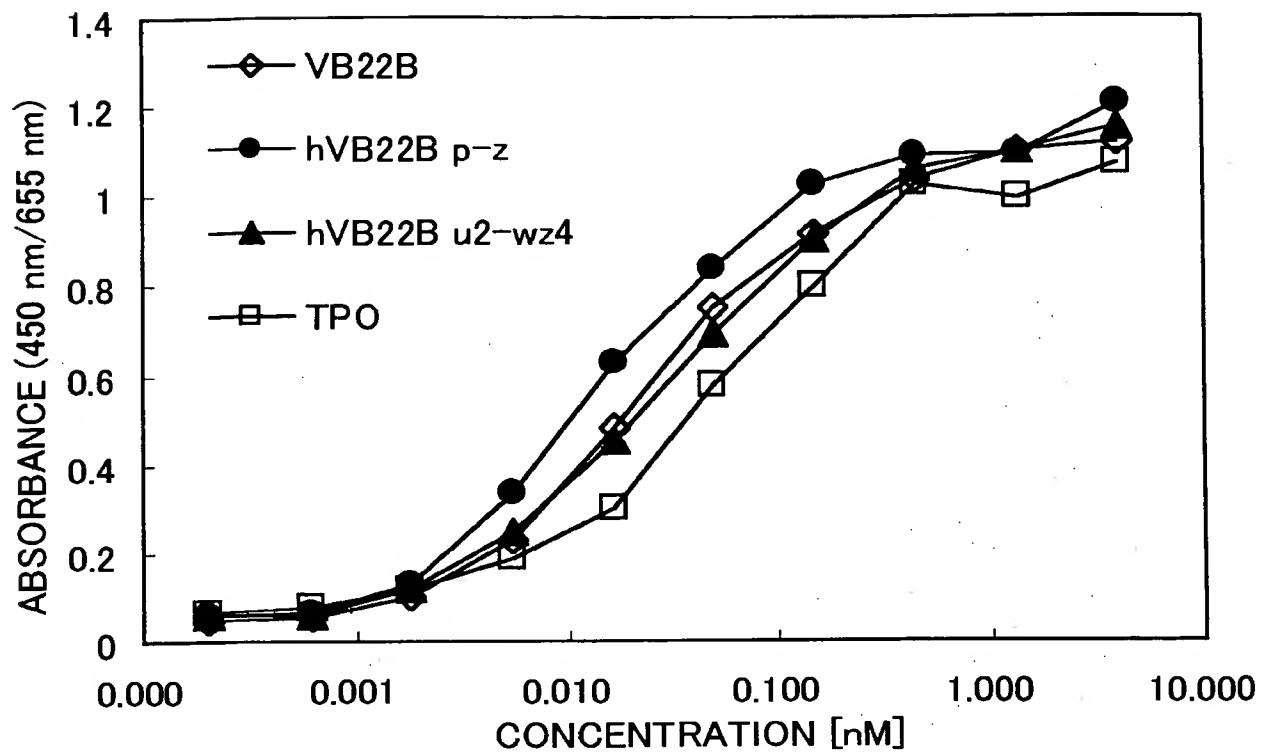


FIG. 20

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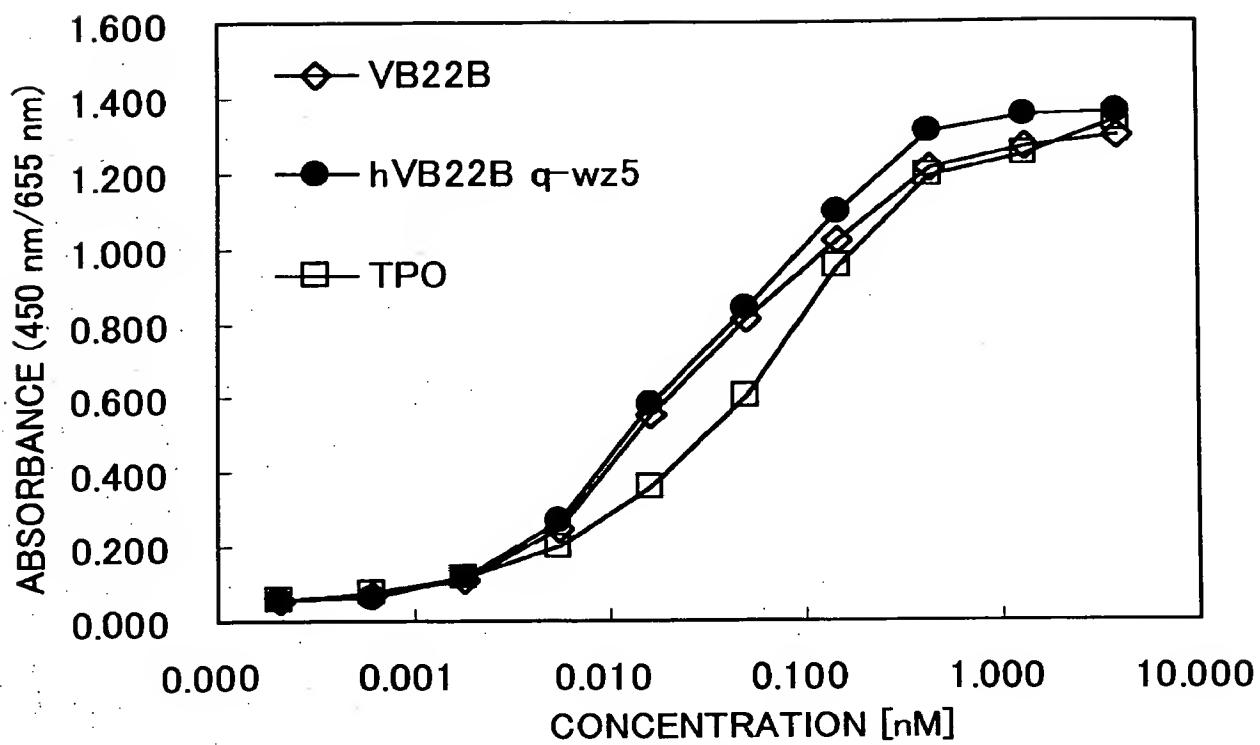


FIG. 21